0 09-0 04 2002 1634

PATENT 09/880,652

1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Serial No.

Filed:

SEP 0 3 2002

& TRADEMA

Examiner:

Group Art Unit:

TORNEY DOCKET

017575.0661

Title:

Burgess et al.

09/880,652

August 14, 2001

Arthur, Lisa B.

1634

Methods of Labeling with Fluorescent Dyes

RECEIVED

SEP 0 9 2002

TECH CENTER 1600/2900

Biomolecules

HONORABLE ASSISTANT COMMISSIONER OF PATENTS
WASHINGTON, D.C. 20231

deposited with the United States Postal Service as Express Mail No. EVI41765071US addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231, on the date shown below.

I hereby certify that this correspondence is being

9/3/02 Date

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Applicants respectfully request, pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, that the references listed on the attached PTO-1449 form, and previously cited in U.S. Application Serial No. 09/460,718, filed December 14, 1999, by Applicant and entitled " Through Bond Energy Transfer in Fluorescent Dyes For Labeling Biological Molecules ," and now U.S. Patent No. 6,340,750 issued January 22, 2002 (the "Parent"), be considered and cited in the examination of the

AUS01:288111.1

2

above-identified divisional application. Pursuant to 37 C.F.R. § 1.98(d), Applicants are only enclosing a copy of the references that were <u>not</u> previously cited in the Parent. Furthermore, pursuant to 37 C.F.R. §§1.97(g) and (h), no representation is made that these references are material to the patentability of the present application.

Applicants believe no fee is due, however, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

Michelle M. LeCointe

Reg. No. 46,861

2001 Ross Avenue, Suite 600 Dallas, TX 75201-2980 (512)322-2580

Date:

8/29/12

6	PE	3. W								
SE.	6 0 4 J	101 C.		Application No.	Applicant(s)				Page 1 of	
P	ro-144	900 Ballina is the second		09/880652		• ,				
N.	e danko	emation Disclos	ure Citation	Docket Number	Burgess et Group Art					
10	in	in an Applic		017575.0661	1634	1004		,		
_		3	···	017373.0001	1034		8/14/01			
SEP	0 3 200	2		U.S. PATENT DOCUMENT	S					
		DOCUMENT NO. DATE		NAME	CLASS	SUBCI	LASS	FILING DATE		
ZB.	DEMAR									
	В.									
_	1			FOREIGN PATENT DOCUME	NTS	<u> </u>		I		
-		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS			SLATION	
-	-	DOGGINENT NO.	DATE			<u> </u>		YES	NO	
-	C.		-		REC	EIV				
	D.				SEF	0 9 20	02		İ	
	,			NON-PATENT DOCUMENT						
		DOCUMENT (Including Author, Title, Source, and Pertine TEGE SENTER 1600/2900					DATE			
1	E.	Tyagi et al., "Molecular Beacons: Probes that flouresce upon hybridization." Nature Biotechnology 14, pp. 303-308 March							ch 1996	
V	F.	Benson et al., "Heterodimeric DNA- binding dye designed for energy transfer: synthesis and spectroscopic properties." Nucleic Acids Res. 21, pp. 5727-5735							December 1993	
V	G.	Kollmannsberger et al., "Electrogenerated chemiluminescense and proton-dependent switching of fluorescence: functionalized difluoroboradiaza-s-indacenes." Angnew. Chem. Int. Ed. Engl. Vol. 36, No. 12, pp. 1333-1335							1997	
J	H.	Geohegan, "Improved method for converting an unmodified peptide to an energy-transfer substrate for a proteinase." Bioconjugate Chem. 7, pp. 385-391							May – June 1996	
V	1.	F. Sanger et al., "A Rapid Method for Determining Sequences in DNA by Primed Synthesis with DNA Polymerase," J. Mol Biol. (1975), Vol. 94, pp. 441-448							Received	
1	J.,	F. Sanger et al., "DNA sequencing with chain-terminating inhibitors, " Proc. Natl., Acad. Sci. U.S.A. (1977) Vol. 74, No. 12, pp. 5463-5467							12/20/74 December 1977	
J	K.	L. M. Smith et al., "Fluorescence detection in automated DNA sequence analysis," Nature Vol. 321 pp. 674-679								
J	L.	T. Hunkapiller et al., "Large-Scale and Automated DNA Sequence Determination," Science, Vol. 254, pp. 59-67							10/4/91	
J	M.	T. Hunkapiller et al., "Large-scale DNA Sequencing," Analytical Biotech., Vol. 2, pp. 92-101								
1,	N.	L. M. Smith, "The Future of DNA Sequencing," Science, Vol. 262, pp. 530-532								
V	Ο.	J. M. Prober et al., "A System for Rapid DNA Sequencing with Fluorescent Chain-Terminating Dideoxynucleotides," Science, Vol. 238, pp. 336-341								

J. Ju et al., "Energy transfer primers: a new fluorescence labeling paradigm for DNA sequencing and analysis," Nature Med., Vol. 2, Number 2, pp. 246-249 EXAMINER DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

2/1996

Ρ.

SEP	O-144	90 JAIOPER II PERING	· ·	Application No.	Application No. Applicant(s) 09/880652 Burgess et al.					
EV.				09/880652						
Information Disclosure Citation				Docket Number	Docket Number Group Art Unit Filing			g Date		
<u> </u>	TPE	in an Applica	ition	017575.0661	1634	1634 8/14/01		1		
050		200		U.S. PATENT DOCUMENTS	U.S. PATENT DOCUMENTS					
SEP 0 3 2002 DOCUMENT NO. DATE			NAME	CLASS	SUBCLASS	FILIN	FILING DATE			
X & X	Q.									
4	ADEM									
	S.			and the second s						
l		<u> </u>	F	OREIGN PATENT DOCUME	NTS					
	DOCUMENT NO. DATE		COUNTRY	CLASS	CLASS SUBCLASS		TRANSLATION YES NO			
	Т.						1123	NO		
	U.									
1		<u> </u>		NON-PATENT DOCUMENT	s			L		
		D	OCUMENT (Includi	ng Author, Title, Source, and	d Pertinent Pages)			DATE		
J	J. Ju et al., "Fluorescence energy transfer dye-labeled primers for DNA sequencing and analysis," Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 4347-4351							May 1005		
V	W.	A. T. Woolley et al., "Ultra-High-Speed DNA Sequencing Using Capillary Electrophoresis Chips," Anal. Chem., 1995, Vol. 67, pp. 3676-3680					,	May 1995 10/15/95		
J	X.	Y. Wang et al., "Rapid Sizing of Short Tandem Repeat Alleles Using Capillary Array Electrophoresis and Energy- Transfer Fluorescent Primers," Anal. Chem., Vol. 67, No. 7, pp. 1197-1202					4/1/95			
V	Υ.	J. Ju et al., "Design and DNA Sequencing and A	Synthesis of Fluores nalysis," Analytical B	cence Energy Transfer Dye-Liochem., Vol. 231, pp. 131-140	abeled Primers and T	heir Application for	5/	5/19/95		
V	Z.	Su-Chun Hung et al., "Energy Transfer Primers with 5- or 6-Carboxyrhodamine-6G as Acceptor Chromophores," Analytical Biochem., Vol. 238, Article No. 0270, pp. 165-170					1/	1/17/96		
J	AA.	John A. Brumbaugh et al., "Continuous, On-line DNA Sequencing Using Oligodeoxynucleotide Primers With Multiple Fluorophores," Proc. Natl. Acad. Sci., Vol. 85, pp. 5610-5614						21/88		
J	BB.	Stanley Tabor et al., "A Single Residue in DNA Polymerases of the <i>Escherichia coli</i> DNA Polymerase I Family is Critical for Distinguishing between Deoxy- and Dideoxyribonucleotides," Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 6339-6343								
V	CC.	Jingyue Ju et al., "Cassette Labeling for Facile Construction of Energy Transfer Fluorescent Primers," Nucleic Acids Res., 1996, Vol. 24, No. 6, pp. 1144-1148								
J	DD.	M. L. Metzker et al., "Electrophoretically Uniform Fluorescent Dyes for Automated DNA Sequencing," Science, 1996, Vol. 271, pp. 1420-1422 with Reviewer's Comments						3/8/96		
J	EE.	S. Hung et al., "Comparison of Fluorescence Energy Transfer primers with Different Donor-Acceptor Dye Combinations," Analytical Biochemistry, 1998, Vol. 255, pp. 32-38								
7	FF.	K. Sonogashira et al., "A Convenient Synthesis of Acetylenes: Catalytic Substitutions of Acetylenic Hydrogen with Bromoalkenes, Iodoarenes, and Bromopyridines," Tetrahedron Letters, No. 50, pp. 4467-4470						11/4/75		
GG. T. Maddux et al., "Stepwise Synthesis of Substitut Chem. Soc., 1997, Vol. 119, pp. 844-845				stituted Oligo(phenylenevinyle		-		29/96		
	MINER				DATE CONSIDER					
EXA	MINER idered.	: Initial if citation considered Include copy of this form wit	l, whether or not citation	on is in conformance with MPEP to the applicant.	§ 609. Draw line through	gh citation if no ire	CEI	vend por		
	O-144!			Application No.	Applicant(s)					
							SEP 0 9 2002			

AUS01:284054.1

	». 	-						Page 3 of 4	
/	OIPE			Docket Number	Docket Number Group Art Unit F		Filing Date		
		<i>'</i> ઠું		017575.0661	1634	8/14/0	1		
H	SEP 0	U.S. PATENT DOCUMENTS							
*		DOSUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILII	NG DATE	
	HH	MARK					_		
	11.						-		
	JJ.						-		
		1		KK. FOREIGN PATENT DOCUM	MENTS				
	·	DOCUMENT NO.	DATE	COUNTRY	CLASS SUBCLAS		TRANSLATION		
	LL.						YES	NO	
	MM.						<u> </u>		
	L	<u> </u>	<u> </u>	NON-PATENT DOCUMENT	·s			1	
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)							
						Onlink Commont # 1		DATE	
√ —	NN.	J. K. Young et al., "Synthesis of Sequence Specific Phenylacetylene Oligomers on an Insoluble Solid Support," J. Am. Chem. Soc., 1994, Vol. 116, pp. 10841-10842							
V	00.	J. S. Schumm et al., "Iterative Divergent/Convergent Approach to Linear Conjugated Oligomers by Successive Doubling of the Molecular Length: A Rapid Route to a 128.ANGLong Potential Molecular Wire," Angew. Chem., Int. Ed. Engl., 1994, Vol. 33, No. 13, pp. 1360-1363							
1	PP.	R. Giesa et al., "Soluble poly(1,4-phenyleneethynylene)s," Makromol Chem., 1990, Vol. 191, pp. 857-867							
J	QQ.	J. L. Reddinger et al., "Luminescent Alkoxy-Functionalized Polyphenylenes," Abstr. Papers Am Chem. Soc., 1996, 211, 530-531							
7	RR.	T. M. Swager et al., "Fluorescence Studies of Poly(p-phenyleneethynylene)s: The Effect of Andiracene Substitution," J. Phys. Chem., 1995, Vol. 99, pp. 4886-4893							
V	SS.	C. Weder et al., "Efficient Solid-State Photoluminescence in New Poly(2,5-dialkoxy-p-phenyleneethynylene)s," Marcomolecules, 1996, Vol. 29, pp. 5157-5165							
7	TT.	C. Devadoss et al., "Energy Transfer in Dendritic Macromolecules: Molecular Size Effects and the Role of an Energy Gradient," J. Am. Chem. Soc., 1996, Vol. 118, pp. 9635-9644							
J	υυ.	Z. Xu et al., "Phenylacetylene Dendrimers by the Divergent Convergent, and Double-Stage Convergent Methods, " J. Am. Chem. Soc., 1994, Vol. 116, pp. 4537-4550							
V	VV.	J. M. Tour, "Conjugated Macromolecules of Precise Length and Constitution. Organic Synthesis for the Construction of Nanoarchitectures," Chem. Rev., 1996, Vol. 96, pp. 537-553							
. √	ww.	R. W. Wagner et al., "A Molecular Photonic Wire," J. Am. Chem Soc., 1994, Vol. 116, pp. 9759-9760 (including 9 [pages of Supplemental Material).							
V	XX.	R. W. Wagner et al., "Boron-dipyrromethene Dyes for Incorporation in Synthetic Multi-pigment Light-harvesting Arrays," Pure & Appl. Chem., 1996, Vol. 68, No. 7, pp. 1373-1380							
EXA	AMINER				DATE CONSIDER	RED			

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not

RECEIVED

SEP 0 9 2002

TECH CENTER 1600/2900

considered. Include copy of this form with next communication to the applicant.

	P ILL SOS					i	Page 4 of 4	
y SEP () SP TO-144	3 2002 U		Application No.	Application No. Applicant(s)				
E.	L		09/880652	Burgess et al.				
TARE!	ermation Disclos	ure Citation	Docket Number				ing Date	
	in an Applica	ation	017575.0661	1634	1634 8/14/01			
			U.S. PATENT DOCUMENTS	\$				
	DOCUMENT NO. DATE		NAME	CLASS	SUBCLASS	FILING DATE		
YY.			· · · · · · · · · · · · · · · · · · ·					
ZZ.								
AAA.								
		ı	FOREIGN PATENT DOCUMEN	NTS				
	DOCUMENT NO.	DATE	COUNTRY	CLASS	S SUBCLASS		SLATION NO	
BBB.								
CCC.								
			NON-PATENT DOCUMENTS	s				
	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)							
DDD.	L.G. Lee et al., "New energy transfer dyes for DNA sequencing," Nucleic Acids Research 1997, Vol. 25, No. 14, pp. 2816-2822							
V EEE.	A. Treibs et al., "Difluorboryl-Komplexe von Di- und Tripyrrylmethenen," Liebigs Ann. Chem. 1968, Vol. 718, pp. 208-223						2/2/68	
J FFF.	T. Chen et al., "Synthesis of 2, 6-Diethyl-3-methacroyloxymethyl-1, 5, 7, 8-tetramethylpyrromethene-BF.sub.2 for the Preparation of New Solid-State Laser Dyes," Chem. 1997, Vol. 8, pp. 51-54						11/1/97	
√ GGG.	M. B. Goldfinger et al., "Directed Electrophilic Cyclizations: Effecient Methodology for the Synthesis of Fused Polycyclic Aromatics," J. Am. Chem. Soc. 1997, Vol. 119, pp. 4578-4593							
√ ннн.	M. S. Vollmer et al., "Ar J. 1998, Vol. 4, No. 2, p	1	1998					
У ш.	M. S. Vollmer et al., "Steroid-Bridged Anthryloligothienylporphyrins: Synthesis and Study on the Intramolecular Energy Transfer," J. Org. Chem. 1998, Vol. 63, pp. 5080-5087							
ال الله	L.R. Middendorf et al., "Large scale DNA sequencing," American Biotechnology Laboratory August 1988 8 Pages						ıst 1988	
KKK.				-				
LLL.								
МММ.								
NNN.								
000.								
EXAMINER	3			DATE CONSIDER	ED			
EXAMINER	R: Initial if citation considered	d, whether or not citation	on is in conformance with MPEP	§ 609. Draw line throug	th citation if not in con	formance	and not	

RECEIVED

SEP 0 9 2002

TECH CENTER 1600/2900